

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A microscope for inspecting a semiconductor wafer, comprising:

an optical unit including objective lenses and oculars for observing the semiconductor wafer;

a display unit for magnifying and displaying an image of the semiconductor wafer observed by the optical unit;

a sample piece stage holding the semiconductor wafer and including at least two wafer stoppers at a radius distance of a round portion of the semiconductor wafer from a central pivot of the semiconductor wafer;

a stage moving unit for moving the semiconductor wafer in an x-axis direction, a y-axis direction and/or a z-axis direction;

a stage rotation unit for rotating the semiconductor wafer in a horizontal direction;

a stage tilting unit for rotating an end of the sample piece stage to tilt the semiconductor wafer from 0° to 180°, wherein the stage tilting unit is displaceable in an x-y-z direction by the stage moving unit; and

a controller for controlling operation of the microscope.

2. (Previously Presented) The microscope of claim 1, wherein the stage tilting unit includes:

a rotation shaft for pivotally supporting the end of the sample piece stage; and

a motor for generating a power to vertically rotate the rotation shaft.

3. (Original) The microscope of claim 2, wherein the motor of the stage tilting unit is a stepping motor.

4. (Original) The microscope of claim 1, wherein the sample piece stage includes at least one wafer detecting sensor for detecting whether the semiconductor wafer is laid on the sample piece stage.

5. (Canceled).

6. (Original) The microscope of claim 1, wherein the sample piece stage includes a flat zone detecting sensor for detecting a flat zone of the semiconductor wafer.

7. (Original) The microscope of claim 1, wherein the stage rotation unit includes a vacuum line, a vacuum chuck including a vacuum absorber for holding the semiconductor wafer using a vacuum pressure, and a motor for generating a power to rotate the vacuum chuck.

8. (Original) The microscope of claim 7, wherein the motor of the stage rotation unit is a DC motor.

9. (Currently Amended) An inspection station for a semiconductor wafer, comprising:

- a platform for holding the semiconductor wafer thereon;
- at least one wafer stopper at a radius distance of a round portion of the semiconductor wafer from a central pivot point of the semiconductor wafer for aligning the semiconductor wafer on the platform;
- rotating means for rotating the semiconductor wafer to a desired tilt angle;

a controller for adjusting the tilt angle of the semiconductor wafer; and
an optical unit for viewing an image of at least a portion of the semiconductor wafer to perform an inspection thereof.

10. (Original) The inspection station of claim 9, further comprising a display unit for displaying the image of the portion of the semiconductor wafer.

11. (Original) The inspection station of claim 9, further comprising a platform moving unit for moving the platform along at least two axes.

12. (Original) The inspection station of claim 9, wherein the rotating means further comprises:

a vacuum chuck for holding the semiconductor wafer on the platform; and
a motor for supplying power to the vacuum chuck.

13. (Previously presented) The inspection station of claim 12, wherein the motor is a stepping motor.

14. (Original) The inspection station of claim 9, wherein the platform includes at least one wafer detecting sensor for detecting whether the semiconductor wafer is laid on the platform.

15. (Canceled).

16. (Previously presented) The inspection station of claim 9, wherein the controller includes means for selecting the desired tilt angle of the semiconductor wafer.

17. (Original) The inspection station of claim 9, wherein the controller includes means for controlling a speed at which the tilt angle of the semiconductor wafer is changed.

18. (Previously Presented) The microscope of claim 1, further comprising at least two air cylinders each configured to move a corresponding one of the wafer stoppers forward and backward.

19. (Previously Presented) The inspection station of claim 9, further comprising an air cylinder configured to move the wafer stopper forward and backward.

20. (Currently Amended) An inspection station for a semiconductor wafer, comprising:

a stage for holding the semiconductor wafer thereon;
at least one wafer stopper at a radius distance of a round portion of the semiconductor wafer from a central pivot point of the semiconductor wafer;
stage moving means for moving the semiconductor wafer in an x-axis direction, a y-axis direction, and a z-axis direction;
rotating means for rotating the semiconductor wafer to a desired tilt angle;
a controller for adjusting the tilt angle of the semiconductor wafer; and
an optical unit for viewing an image of at least a portion of the semiconductor wafer to perform an inspection thereof.

21. (Previously Presented) The inspection station of claim 20, further comprising at least two wafer stoppers adapted to align the semiconductor wafer on the stage.

22. (New) The inspection station of claim 9, further comprising a second wafer stopper at a radius distance of the round portion of the semiconductor wafer from the central pivot point of the semiconductor wafer for aligning the semiconductor wafer on the platform.

23. (New) The inspection station of claim 20, further comprising a second wafer stopper at a radius distance of the round portion of the semiconductor wafer from the central pivot point of the semiconductor wafer.